



**Household Income Trends:
December 2011**

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Summary of Findings

According to new data derived from the monthly Current Population Survey (CPS), real median annual household income increased by 4.0 percent between August 2011 and December 2011, from \$49,434 to \$51,413. This change is the cumulative result of four consecutive monthly increases in real median annual household income: August to September (1.1 percent), September to October (0.8 percent), October to November (0.7 percent), and November to December (1.3 percent).

These increases stand in sharp contrast to the long downward trend that has defined income change in the post-recessionary period. They coincide with a period of job growth and a declining unemployment rate. This upward trend in household income embodies both the added earnings of unemployed household members finding jobs and changes in earnings that result from shifts in wage rates or hours worked for members with existing jobs. Prospects for continued improvement in the labor market, and subsequently household income, are uncertain and we must, therefore, continue

to monitor the survey data closely in future months.

(Income amounts in this report are before-tax money income and have been adjusted for inflation; income amounts are expressed in December 2011 dollars and have been seasonally adjusted, unless otherwise noted.)

Notwithstanding this increase, real median annual household income in December 2011 was still 3.9 percent lower than the level of median annual household income in June 2009, the ending month of the recent recession (December 2007 to June 2009) and official start of the economic recovery.

The median annual household income in December 2011 can be put into broader perspective by a comparison with previous levels of income dating from the start of the last decade. In January 2000, real median annual household income stood at \$55,824. At the beginning of the last recession in December 2007, real median annual household income was \$55,297, slightly lower than the level at the start of the decade. The

ensuing 19-month recessionary period left real median household income at \$53,506, down 3.2 percent. In December 2011 the level of real median household income was 7.0 percent lower than December 2007.

The Household Income Index (HII) shows the value of real median annual household income in any given month as a percent of the base value at the beginning of the last decade (January 2000 = 100.0 percent). The HII for December 2011 stood at 92.1, up from 90.9 in November, 90.3 in October, 89.5 in September, and 88.6 in August. Based on the key measures of employment hardship illustrated in Figures 1, 2, and 3 below, there has also been some improvement during this time period in the labor market as well, especially in the unemployment rate.

Three employment hardship measures—the unemployment rate, the duration of unemployment, and a broad measure of employment hardship that groups the unemployed, discouraged workers, and part-time workers who want full-time work—are contrasted against the HII in the figures noted above. As shown in Figure 1, between August 2011 and December 2011, the unemployment rate declined from 9.1 percent to 8.5 percent, with the most significant decrease occurring between the months of October (9.0 percent) and November (8.6 percent). As shown in Figure 2, the median number of weeks unemployed was lower in December 2011 (21.0 weeks) than in August 2011 (21.8 weeks). As shown in Figure 3, the broad measure of employment hardship in December 2011 (15.2 percent) was significantly lower than in August 2011 (16.2 percent), with a large decline occurring from October 2011 (16.2 percent) to November 2011 (15.6 percent).

Other economic factors, such as changes in average hourly earnings and average hours worked per week, may also be indicating some improvement in the condition of the U.S. labor market. At the start of the recession in December 2007, the average hourly earnings (expressed in December 2011 dollars) for all private employees were \$22.83 per hour. After taking inflation into account during the recession and the economic recovery, average hourly earnings increased to \$23.25 by December 2011. The average number of hours worked per week for all private employees was 34.6 in December 2007, falling to a low of 33.8 in June 2009, and then rebounding to 34.5 by December 2011 (all figures are seasonally adjusted from the U.S. Bureau of Labor Statistics based on the Current Employment Statistics survey).

The Nation's official estimates of household income and poverty are released once a year by the U.S. Census Bureau. Official data derived from the March 2011 Current Population Survey Annual Social and Economic Supplement (CPS ASEC) that relate to annual income received during calendar year 2010 were released on September 13, 2011. While the U.S. Census Bureau provides the most accurate measures of both the level and change in household income, the new series presented in this report provides an interim measure that tracks income changes on a monthly and quarterly basis, an attribute that is especially important during periods of economic instability. As demonstrated in this and our previous reports, the new series has the ability to track household income changes during the specific months of events, such as the recession and the economic recovery, that do not coincide neatly with calendar year boundaries.

Data Sources and Estimation Methods

This study is based on data collected in the Current Population Survey (CPS), the same household survey used to derive the official monthly unemployment rate. Data have been compiled from each monthly survey taken since January 2000 (as of December 2011, 144 surveys in total). Each of these surveys collected data for a nationally representative sample of more than 50,000 interviewed households and their respective members (approximately 135,000 per month). The survey collects the detailed information needed to determine the employment characteristics of all civilians age 16 years old and over and to compute the official unemployment rate. It also collects key demographic and social characteristics for all household members, including children. Some of these are as follows:

- Age
- Gender
- Relationship to householder (i.e. spouse, own child, grandchild, nonrelative, etc.)
- Race and ethnicity
- Educational attainment
- Veteran's status (era of past membership in the armed forces)
- Presence of disabilities
- Citizenship
- Country of birth

Estimates of household income from the survey are based on a single question that asks respondents to report the total money income received by the household during the previous 12-month period. The definition of income used in the survey includes the following:

- Wages and salary
- Nonfarm self-employment income

- Farm self-employment income
- Social Security and Supplemental Security Income
- Interest, dividends, net rental income, and royalties
- Cash public assistance (federal and state)
- Unemployment compensation and workers' compensation
- Retirement income from pensions, annuities, other retirement plans
- Veterans' pensions and compensation
- Child support and alimony
- Other cash income **excluding** capital gains or lump sum, one-time amounts

The total amount of household income before taxes is recorded in one of 16 categories as shown below:

- Under \$5,000
- \$5,000 to \$7,499
- \$7,500 to \$9,999
- \$10,000 to \$12,499
- \$12,500 to \$14,999
- \$15,000 to \$19,999
- \$20,000 to \$24,999
- \$25,000 to \$29,999
- \$30,000 to \$34,999
- \$35,000 to \$39,999
- \$40,000 to \$49,999
- \$50,000 to \$59,999
- \$60,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$149,999
- \$150,000 and over

The raw data collected for each household member in the survey must be aggregated and summarized at the household level in order to generate the household statistics underlying this analysis. Householders are

identified in order to compute statistics that relate to characteristics of the householder. Counts of the number of household members, number of children, and number of earners are computed by examining each household member's detailed information. Missing responses to the question on household income are imputed using statistical matching techniques in order to adjust for any nonresponse bias. Procedures for imputing missing responses are based on the same methodology used by the U.S. Census Bureau for the Annual Social and Economic Supplement (CPS ASEC), the source for official estimates of annual income, poverty, and health insurance coverage. There are some reporting differences when asking for total household income as compared to using the CPS ASEC supplemental questionnaire, which asks a detailed series of questions on the receipt of income during the previous calendar year. We have made adjustments to correct for bias caused by these differences. The U.S. Census Bureau's estimates for calendar year 2010 were released on September 13, 2011. That release does not include any monthly trend data, and, therefore, does not report on any income developments during 2011.

All statistics shown in this analysis are based on weighted sample data. The survey for each month includes a sample weight for each household. The sum of these weights across all sample households provides a national estimate of the total number of households existing for that month. When summed these weights also provide estimates of the number of households by characteristics such as race, age, gender, presence of unemployed, etc.

Estimates shown in this report may differ from actual values because of both sampling variability and nonsampling error. Sampling

variability occurs because responses are obtained from a sample of the population (50,000 interviewed households) rather than from a full census. Nonsampling error can occur from a variety of factors. Households may report incorrect information when answering questions about the total amount of household income received during the past 12 months prior to the interview. When a respondent forgets the exact dates for a sequence of events this can result in a known survey bias called "telescoping," in which the reporting of the events is telescoped either forward or backward.

The telescoping phenomenon may be especially relevant in situations where household members become unemployed or find a job after a significant period of unemployment. For example, a respondent who recently found a job following a long period of unemployment may erroneously include the annual salary from the new job when responding to the household income question in the CPS that should be restricted only to income received during the 12-month period prior to the survey month. Similarly, respondents with Social Security income may use their current monthly Social Security benefit to compute annual household income during the previous 12-month period even though the current monthly amount reflects the first month following a cost-of-living adjustment.

The Consumer Price Index (CPI-U) for all urban consumers has been used to make adjustment for changes in prices where noted in the tables and text of the report.

The Household Income Index (HII) has been seasonally adjusted to reduce seasonal differences in the reporting of household income. Various factors may contribute to seasonal difference in the way households

report their incomes in the CPS. Earlier studies by the U.S. Census Bureau have shown that reports of household income tend to rise as the survey month approaches the April tax-filing period. This trend, while apparent in surveys of the 1980's and early 1990's, is less pronounced in more recent

years. Seasonal adjustments are made using the X-12-ARIMA software. This software was developed by the U.S. Census Bureau and is the same software used to create adjustment factors for monthly employment and unemployment series released by the U.S. Bureau of Labor Statistics.

About the Authors

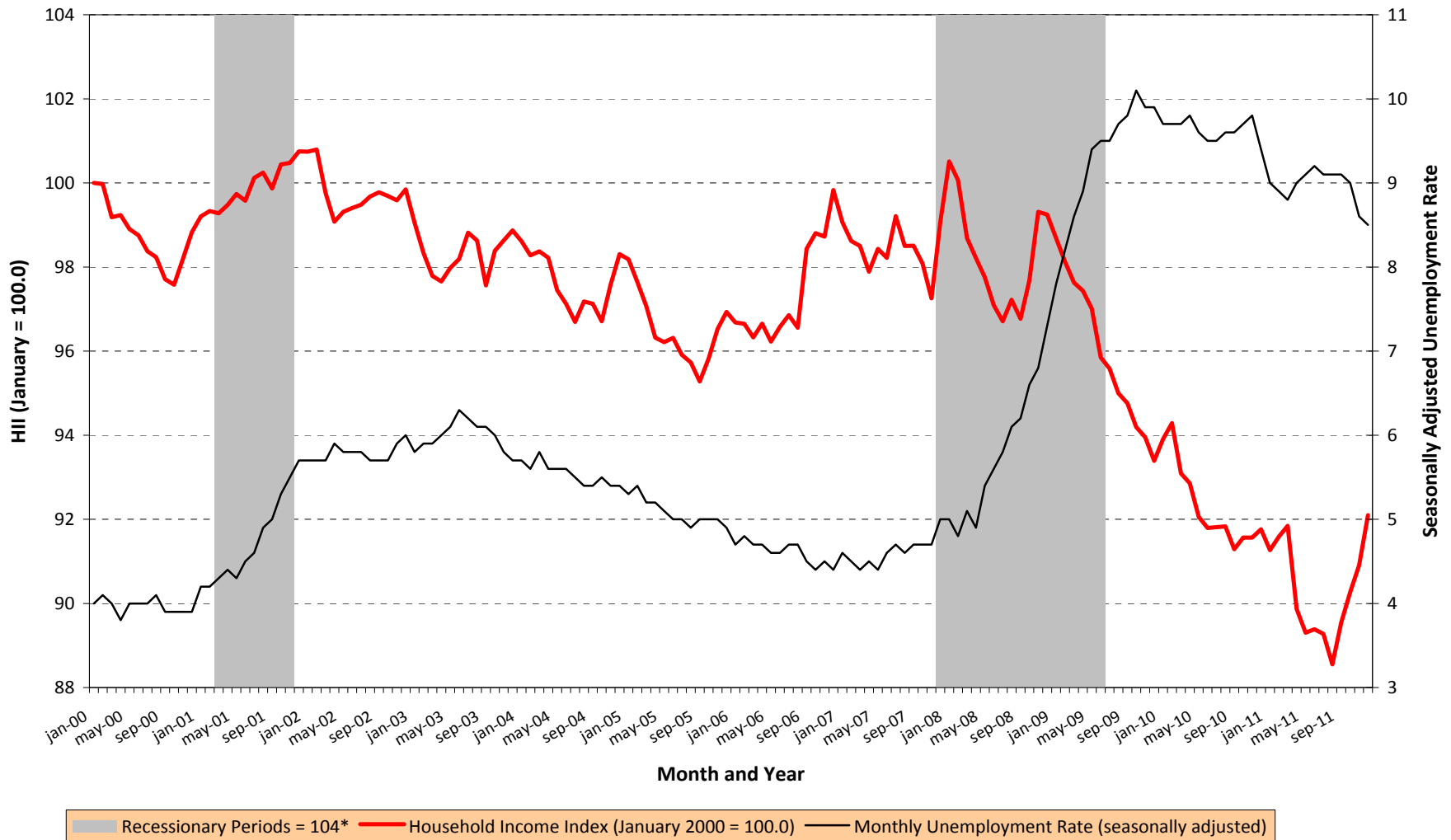
Gordon Green is a former Chief of the Governments Division at the U.S. Census Bureau and a member of the Senior Executive Service (SES). For many years at the U.S. Census Bureau, he directed work on the Nation's official income and poverty statistics program. He received a Ph.D. in economics from The George Washington University in 1984. He is author of the book, *Making Your Education Work for You* (Forge, 2010), which shows students how to make top grades in high school and college and engage in effective job planning. He is also author of the book, *How to Get Straight A's in School and Have Fun at the Same Time* (Forge, 1999), which is intended for younger students. Additional information is available at: www.gordonwgreen.com

John Coder is a former Chief of the Income Statistics Branch at the U.S. Census Bureau. While at the U.S. Census Bureau he directed collection and processing of income and related data collected in the March Current Population Survey (CPS) and was instrumental in developing new methods for imputing missing survey responses. He also was founder of the U.S. Census Bureau's Small Area Income and Poverty Estimates Program. He played a key role in developing the Luxembourg Income Study, which is a data center for making cross-national comparisons, available at the website: www.lisdatacenter.org

The authors gratefully acknowledge the valuable assistance provided by Anne Fengyan Shi in preparing this report. She received a Ph.D. in government from Georgetown University in 1999, and has been a social science researcher ever since.

Figure 1.

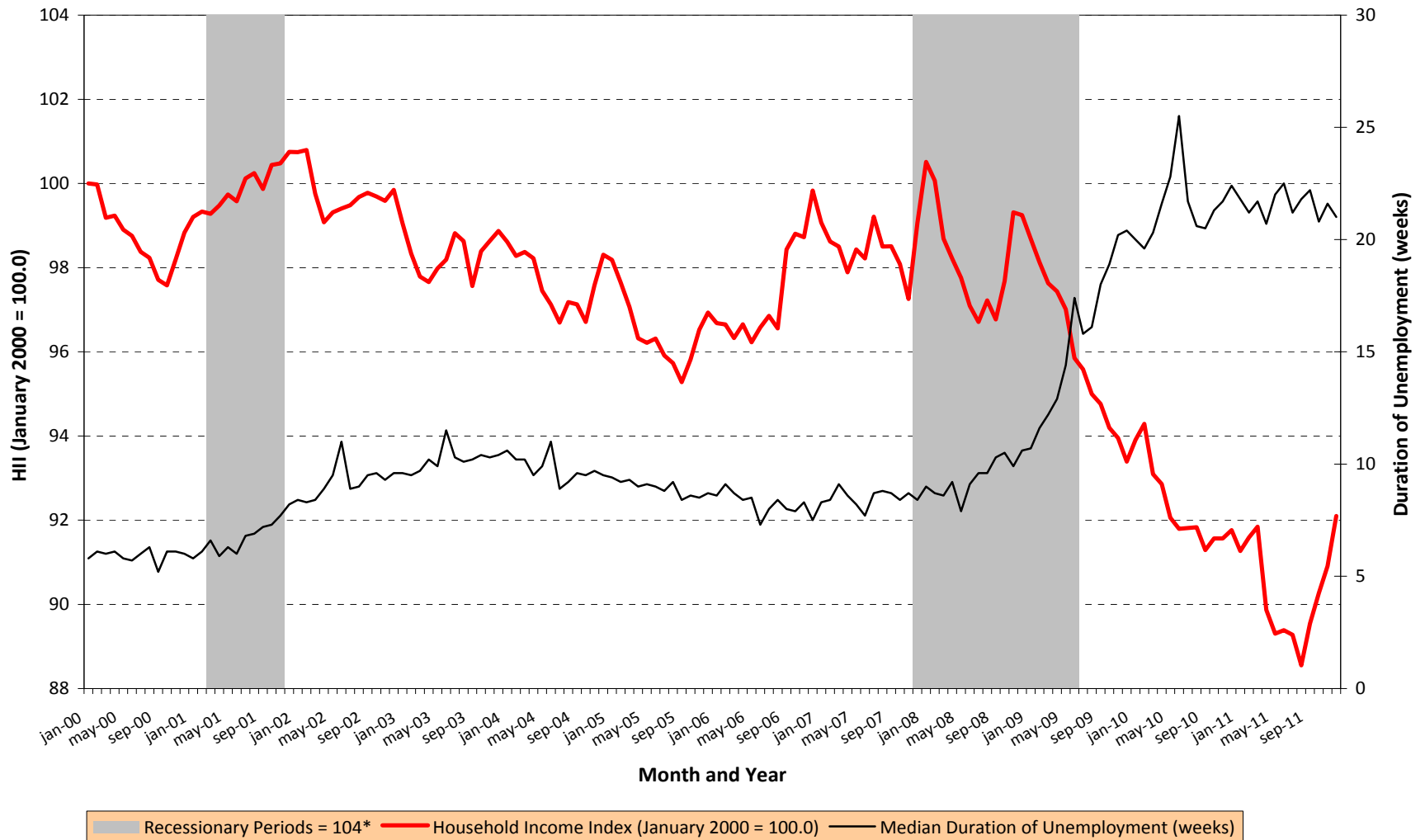
Median Household Income Index (HII) and Unemployment Rate by Month: January 2000 to December 2011



Sources: For income data: Sentier Research, LLC estimates of annual household income derived from the monthly Current Population Survey (CPS) conducted by the U.S. Census Bureau; for the unemployment rate and the CPI-U: the U.S. Bureau of Labor Statistics.

Figure 2.

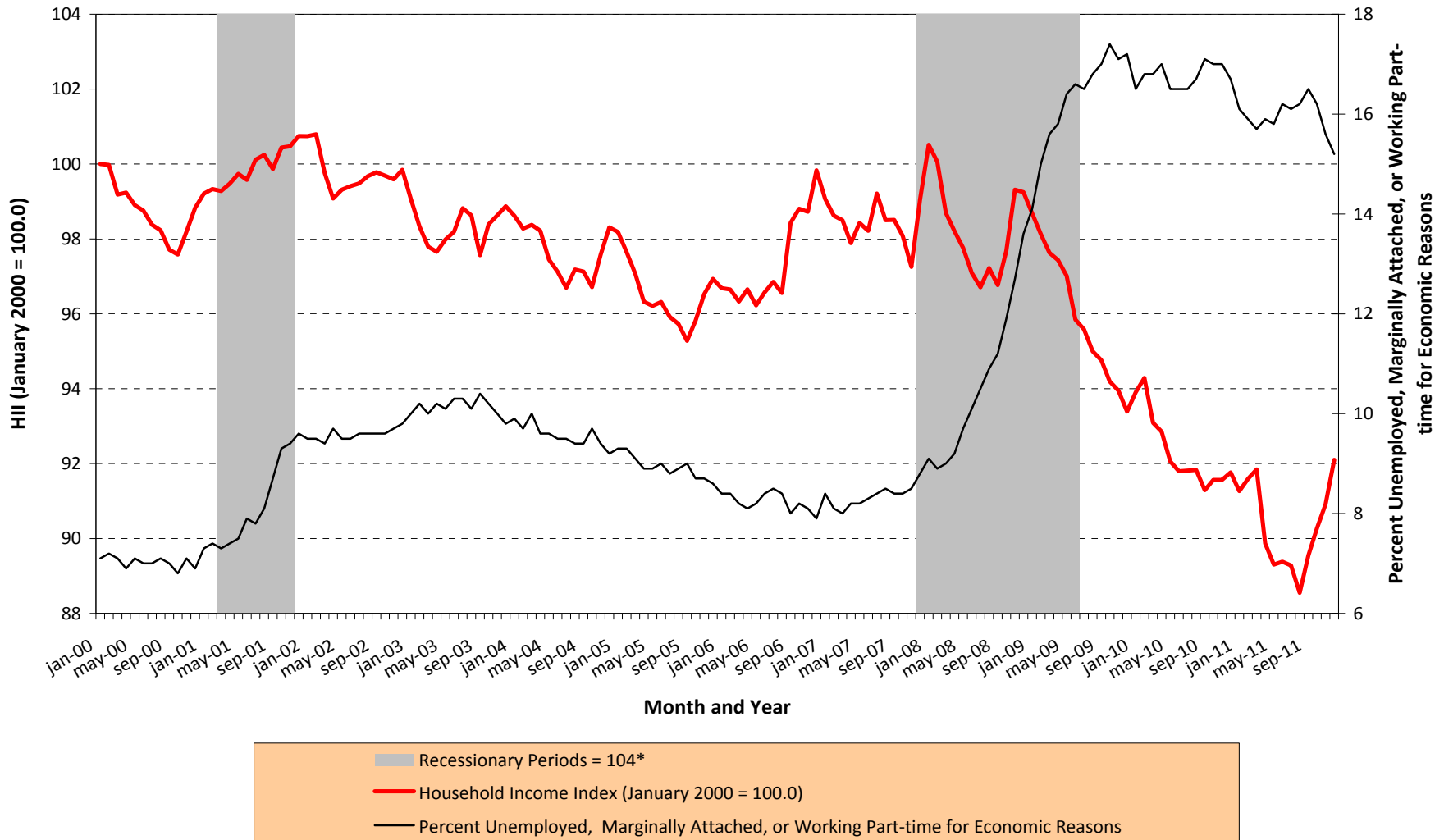
Median Household Income Index (HII) and Median Duration of Unemployment by Month, January 2000 to December 2011



Sources: For income data: Sentier Research, LLC estimates of annual household income derived from the monthly Current Population Survey (CPS) conducted by the U.S. Census Bureau; for the median duration of unemployment and the CPI-U: the U.S. Bureau of Labor Statistics.

Figure 3.

Median Household Income Index (HII) and Percent Unemployed, Marginally Attached, or Working Part-time for Economic Reasons by Month, January 2000 to December 2011



Sources: For income data: Sentier Research, LLC estimates of annual household income derived from the monthly Current Population Survey (CPS) conducted by the U.S. Census Bureau; for the percent unemployed, marginally attached, or working part-time for economic reasons and the CPI-U: the U.S. Bureau of Labor Statistics.